

What is claimed is:

1. An integrated device for oxygenating and filtering blood flowing through an extracorporeal blood circuit comprising:
  - 5 a blood reservoir having an inlet for receiving venous blood and an outlet for supplying venous blood;
  - a blood pump having an inlet connected to receive blood from the outlet of the blood reservoir and an outlet;
  - a heat exchanger having a blood inlet connected to receive venous blood
  - 10 from the outlet of the pump and a blood outlet for supplying temperature controlled venous blood;
  - an oxygenator having an inlet connected to receive venous blood from the outlet of the heat exchanger and an outlet for supplying oxygenated blood;
  - an arterial blood filter having an inlet connected to receive oxygenated
  - 15 blood from the outlet of the oxygenator and an outlet for supplying filtered oxygenated blood; and
  - a monolithic housing including a first portion for defining the blood reservoir, a second portion for defining the blood pump, a third portion for defining the heat exchanger, a fourth portion for defining the oxygenator and a
  - 20 fifth portion for defining the arterial blood filter.
2. The integrated device of claim 1 wherein the blood pump comprises a centrifugal pump.
- 25 3. The integrated device of claim 2 wherein the centrifugal pump has an axis and wherein the centrifugal pump is positioned within the monolithic housing such that the axis of the centrifugal pump is horizontal.
4. The integrated device of claim 1 wherein the blood reservoir comprises
- 30 a venous reservoir and a cardiectomy reservoir.

5. The integrated device of claim 4 wherein the monolithic housing comprises connection means for allowing removeable connection of the first portion.
- 5 6. A system for establishing an extracorporeal blood circuit comprising:  
a blood reservoir;  
a blood pump;  
a heat exchanger;  
an oxygenator;  
10 an arterial blood filter; and  
a housing for incorporating and interconnecting the blood reservoir, the blood pump, the heat exchanger, the oxygenator and the arterial blood filter into a monolithic structure, the housing having an inlet for supplying venous blood to the blood reservoir and an outlet for supplying oxygenated blood from  
15 the arterial blood filter.
7. The system of claim 6 wherein the blood pump comprises a centrifugal pump.
- 20 8. The system of claim 7 wherein the centrifugal pump has an axis and wherein the centrifugal pump is positioned within the housing such that the axis of the centrifugal pump is horizontal.
9. The system of claim 6 wherein the blood reservoir comprises a venous  
25 reservoir and a cardiectomy reservoir.
10. The integrated device of claim 9 wherein the housing comprises connection means for allowing removeable connection of the blood reservoir.